

Renewable energy certificates: a cost-effective solution to reach your environmental targets

Context

Global corporates are increasingly under scrutiny by the general public and by NGOs. Being seen as a big polluter can hurt your brand. Not addressing energy procurement can leave your company vulnerable to certain risks, like changing regulations and legal requirements. For an increasing number of companies, electricity is a prime resource in their value chains. More and more companies have set themselves a target of sourcing 100% renewable energy.

Challenge

The risks of ignoring renewable energy

Energy production based on fossil fuels accounts for 26% of global greenhouse gas (GHG) emissions. Companies who do not address the impact of their energy sourcing directly contribute to rising GHG emissions. Industry reports, such as Greenpeace's "How green is your cloud?", highlight the fact that such companies are hurting their corporate image by continuing business as usual.

The opportunities of renewable energy

Making the conscious choice of switching to renewable energy allows you to demonstrate a genuine commitment towards climate change mitigation to customers, employees and other stakeholders. By investing in renewable energy certificates, you can contribute to increasing the share of renewables in the global energy mix.

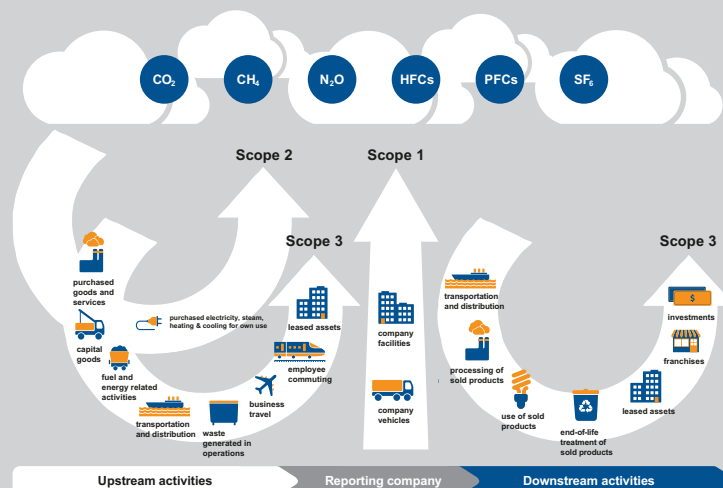
What are renewable energy certificates?

When consuming electricity, it is impossible to trace directly whether it was produced using renewables, fossil fuels or nuclear. For that reason, certification systems have been established to identify the sources of electricity. Guarantees of Origin (GOs) are certificates that are issued for every megawatt-hour (MWh) of electricity produced by a power station. Companies buy GOs to claim the use of a certain type of power source. Renewable Energy Certificates (RECs) only contain renewable sources. RECs and renewable energy GOs are tradable and non-tangible commodities. Utilities that offer green tariffs to wholesale and retail consumers typically have to use RECs or GOs to validate this green claim.

Various REC and GO standards and products are currently available on the market. The European Energy Certificate System (EECS), allows the tracking, transfer and redemption of GOs originated from power plants located in 21 European countries. In addition, eco-labels certify power plants with additional attributes not present in the original REC or GO, such as ecological attributes or maximum age of the plants. In the US, RECs are traded in 10 unconnected tracking systems. Green-e certified RECs are the most widely used eco-labels in the US.

Other renewable energy schemes exist internationally, but most countries in South America, Africa and Asia have not yet established any REC schemes. International REC products such as GoldPower and I-RECs fill this gap.

With RECs companies can reduce Scope 2 emissions effectively





Criteria for RECs selection

When defining renewable energy purchases, the following sourcing and selection criteria need to be taken into account:

1 Volume of RECs or GOs

If the REC purchase is reported in your annual GHG report under the market-based method of the GHG Protocol Scope 2, then the volume of RECs would typically match the amount of electricity consumed by your operations.

2 Geographic location

RECs and GOs used for GHG Protocol Scope 2 reporting must be sourced from renewable electricity production facilities in the same market (i.e. the same country or the same region) as the reporting entity's electricity consumption. Purchasing RECs from renewable energy plants connected to high-emissions grids leads to higher avoided GHG emissions and thus a more positive environmental impact.

3 Renewable energy technology

Each renewable energy scheme or eco-label defines eligible renewable technologies. These typically include: wind, hydro, solar, geothermal and bioenergy (solid, liquid, gas).

4 Age of the plant

Only "young" power plants qualify for certain eco-labels and thus can receive a share of the premium paid for the eco-label. When a power plant passes the age limit, it has to resign from financial incentives. The funds are then channelled to other newly built renewable power plants.

5 Vintage year

This is the year of renewable electricity production. The GHG Protocol requires that the year of electricity consumption of a reporting entity is "as close as possible" to the vintage year of the purchased RECs or GOs. Eco-labelling schemes can set more precise criteria.

6 Timing of REC retirement

Rules exist on the timing of retirement of the REC or GO within their relative tracking system.

7 Additionality of the power plant

The market for RECs has been historically categorised by oversupply. Hence, there is no market incentive to increase the supply of RECs in building additional capacity from renewables. There are however high-quality RECs and eco-labels that address this problem.

8 Co-benefits of the power plant

Apart from generating renewable electricity, certain power plant developers have invested in the well-being of communities that live near the power plants. Additional economic, social and environmental benefits can therefore be documented.

Why purchase renewable energy certificates?

Purchasing RECs and GOs helps you reach various environmental targets, without the constraints and the costs of direct investments or entering power purchase agreements with renewable energy suppliers.

Renewable certificates can:

- 1 Help you achieve the RE-100 initiative goal of using 100% of renewable sources by 2020
- 2 Reduce your Scope 2 GHG emissions in a cost-effective way (as defined by the GHG Protocol). The recently released GHG Protocol Scope 2 Guidance sets quality criteria for RECs. Under the "market-based approach", you can match your electricity consumption with renewable energy certificates.
- 3 Help you achieve voluntary corporate absolute or intensity emission reduction targets
- 4 Improve your performance in the CDP Climate Performance Leadership Index
- 5 Allow you to obtain points for LEED certification for selected company buildings



Comparison of different Renewable Energy Certificate solutions

REC Standard/ Eco-label	Location of Power Facilities	Eligible Technologies	Age of Power Facilities	Vintage – Timing of REC retirement – Expiry	Additionality of Plants	Co-Benefits
GoldPower	Current: Asia, Latin America, Europe (Turkey)	Grid-connected wind, hydro, biomass, geothermal, solar. Excluded: biogas, landfill gas, waste water treatment gas, coal mine methane, peat	Recent, typically less than 10 years	Maximum 2 years prior to reporting year.	RECs are underpinned by carbon credits (Gold Standard VER and CER). Without the sale of environmental attributes, power facilities would not have reached financial closure.	GoldPower facilities have documented and verified social, economic and environmental co-benefits for local communities.
International RECs (I-RECs)	Current: Taiwan Turkey, open to all countries without REC system	Grid and not grid-connected wind, hydro, solar, biomass, biogas, landfill gas, liquid biomass to energy, marine wave, tidal. Excluded: Co-firing of biomass, coal mine, geothermal.	Any	No vintage requirement No rules on I-REC retirement timing. I-RECs do not expire	No requirement on additionality	No requirement on co-benefits
European GOs	Europe (currently 21 countries)	All technologies, fossil fuel based, all renewable, nuclear, grid-connected and not.	Any	Vintage, retirement and expiry regulations vary per country. Typically GOs expire within 1 year of issuance and shall be retired by April following the purchase year.	No requirement on additionality	No requirement on co-benefits
GOs with Naturamade star label	Europe (currently 21 countries)	Electricity: Hydro (with restrictions), wind, solar PV, sewage gas, woody biomass. Heat: woody biomass, co-firing with gas, biomethane	Any	National rules for GOs apply	No requirement on additionality.	Minimisation of ecological impacts of power plants. Hydroplants must pay into a fund for ecological activities
GOs with OK Power label	Europe (currently 21 countries)	Renewable energy plants eligible under German EEG law (wind, hydro, biomass, co- firing, geothermal, solar) with requirements. Excluded: landfill gas, peat, MSW, coal mine	1/3 from plants <6 years old, 1/3 between 6 and 12 years old, rest from older plants	National rules for GOs apply	Alternative to age requirements, producers may support new renewable plants through a fund model or initiation model	No requirement on co-benefits but power plants must minimise their ecological impacts
GOs with EKOEnergy label	Europe (currently 21 countries)	Wind, hydro, solar, bio-energy (solid, gas, liquid), marine, geothermal, sewage gas, landfill gas	Any	National rules for GOs apply	For all electricity sold with this label, money must be devoted to a fund that invests in new renewable electricity in developing countries	No requirement on co-benefits. Hydroplants must pay into a fund for rivers- related ecological activities
GOs with TÜV Süd EE01 label	Europe (currently 21 countries)	All renewable energy plants eligible under German EEG law. Excluded: peat, coal mine methane	30% of electricity from plants max. 3 years old at first certification	National rules for GOs apply	Alternative to age requirements, producers may support new renewable plants through a fund model	No requirement on co-benefits
North American RECs	USA, Canada	Depends on US region	Any	Depend on US region, Typically RECs expire within 1 year of issuance and are retired by April after purchase year	No requirement on additionality	No requirement on co-benefits
North American RECs with Green-e Energy label	USA, Canada, Puerto Rico, portions of Mexico	Solar, wind, geothermal, hydro (with restrictions), marine, biomass (solid, liquid, gas, co- firing, with restrictions), landfill gas, sewage gas. Excluded: peat, coal mine methane, MSW	Maximum 15 years old	The year in which the REC is sold, the first 3 months of the following year and the last 6 months of the preceding year	RECs cannot be used for compliance with renewable portfolio standards and emissions trading schemes. Renewable plant shall not be mandated by law	No requirement on co-benefits



In a nutshell

We offer high quality renewable energy products at competitive prices. Our portfolio consists of products based on a wide range of technologies and eco-labels from a variety of countries. We match your regional electricity consumption with certificates generated by power facilities located in the same regions. We help you select the best solutions that align with your renewable energy goals, reporting needs and general CSR objectives.

Our services include consulting on the selection of the most appropriate REC products, offsetting services with a wide portfolio of carbon credits, reliable communication support and quantification of co-benefits of the power plants from which the RECs are sourced.

Why work with us

Global team

We are a truly global provider of sustainability solutions and services. Our team is made up of over 130 skilled and enthusiastic professionals from over 20 different countries, based in offices spanning 6 continents.

Proven impact

Since 2006, we have measured the climate impact of countless companies and products worldwide. We have screened USD 200 bn+ of investments for their climate impact and we have developed 270+ projects in renewables, forestry, agriculture, industry and households. Through our efforts, 50 million tonnes of CO₂ have been saved, almost as much as the annual CO₂ emissions of Portugal. We have enabled the production of 35,000 GWh of renewable energy (more than the annual electricity consumption of Denmark), and mobilized over USD 6 bn for clean energy investments in emerging markets. In total, our projects have helped create almost 20,000 jobs in developing countries and we have saved 17,000+ hectares of forest from deforestation, about the size of 24,000 soccer pitches.

Added value

We help you grow with groundbreaking solutions that benefit your business, the environment and society.

